"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, A.S.

Eliminating the effect of texture on the intensity of lines during the x-ray examination of solid specimens. Zav.lab. 27 no.6:712-713 '61. (MIRA 14:6)

1. Moskovskiy institut stali imeni I.V.Stalina.
(X rays--Industrial applications)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, A.S.; RASS, T.G.; GORAZDOVSKIY, T.Ya.

Certain regularities in the formation of the so-called "friction austenite." Fiz. met. i metalloved. 12 no.4:617-619 O '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy institut podshipnikovoy promyshlennosti, Moskva.
(Steel—Hardening)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

GORAZDOVSKIY, T.Ya.; KAGAN, A.S.; RASS, T.G.

Quantitative determination of residual austenite using an apparatus with scintillation recording. Zav.lab. 28 no.5:597 '62. (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut podshipnikovoy promyshlennosti.

(Austenite)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, A.S.

Measuring the coefficients of thermal expansion by the X-ray method. Zav.lab. 30 no.4:459-461 '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy institut podshipnikovoy promyshlennosti.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AR4014142 S/0137/63/000/012/V048/V048

SOURCE: RZh. Metallurgiya, Abs. 12V353

AUTHOR: Kagan, A. S.; Levitin, V. S.; Ostrovskaya, Ye. A.

TITLE: Some properties of vacuum steel used in the production of instrument bearings

CITED SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 1 (33), 1963, 49-53

TOPIC TAGS: Instrument bearing steel, vacuum steel, vacuum steel remelting, steelmaking

TRANSLATION: ShKh15P steel for the production of precision instrument bearings is made by the following methods: 1. Double vacuum remelting of consumable electrodes made from high-purity charge materials (carbonyl Fe, spectroscopically pure C, crystalline Si, etc.). 2. Single vacuum remelting of consumable electrodes which were first subjected to electroslag remelting. The billets for

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ACCESSION NR: AR4014142

electroslag remelting are melted by the usual process in electric arc furnaces. 3. Single vacuum remelting of consumable electrodes melted by the usual process in electric arc furnaces. Investigations of the quality of the metal melted by these methods showed that the metal melted by the first method is the purest with respect to nonmetallic inclusions. Steel made by the second method is contaminated with point nitride inclusions, for the elimination of which a double vacuum remelting of the electroslag metal is proposed. G. Lyubimova.

DATE ACQ: 09Jan64 SUB CODE: ML ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, A.S.

Intensities of the diffraction reflections of a specimen with axial texture. Zhur. tekh. fiz. 33 no.12:1456-1458 D '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, A.S.

Investigating the plastic deformation of a polycrystal by the change of texture. Fiz. met. i metalloved. 17 no.6:917-923 Je '64. (MIRA 17:8)

1. Zagorskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta podshipnikovoy promyshlennosti.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AP4033616 S/0032/64/030/004/0459/0461

AUTHOR: Kagan, A. S.

TITLE: Concerning the measurement of the thermal expansion coefficient by the x ray diffraction method

SOURCE: Zavodskaya laboratoriya, v. 30, no. 4, 1964, 459-461

TOPIC TAGS: thermal expansion coefficient, x ray diffraction, dilatometric measurement, furnace inclination, ionization unit URS 50I adapter, goniometer, steel ShKh15

ABSTRACT: The linear coefficient of thermal expansion ($\alpha$), when determined by x-ray diffraction ($\alpha_r$), is always larger than when determined by the dilatometric method ($\alpha_d$). This difference is greater for a massive than for a powdered sample and increases with the dispersion of the powder. The reason for $\alpha_r$ and $\alpha_d$ disagreement lay in the fact the samples sometimes shifted during heating (in the $\alpha_r$ measurements). In an inclined furnace a sample shift off center by 0.1 mm resulted in a 1.2' error in the reflection angle, and led to an error in $\alpha_r$ of $1.5 \cdot 10^{-6}$ (at $\Delta T = 180C$, $\theta = 70^{\circ}$). A special adapter for the ionization unit URS-50I (see Fig. 1 on the Enclosure) was constructed so that the elongation of the

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AP4033616

sample holder is symmetrical to the goniometer axis. Measurements of copper, nickel, and aluminum, with both massive and powdered (2 and 20 $\mu$ diameter particles) samples in the temperature interval of 22-200C gave an $\alpha_r - \alpha_d$ smaller than 3%. This error was probably due to the varying purity of the sample. A measurement by the new adapter of $\alpha_r$ for steel ShKh15 (hardened and tempered at 250C for 3 hours) gave $12.8 \pm 0.2 \cdot 10^{-6}$, while $\alpha_r$ obtained with the old inclined system was $15.1 \pm 0.2 \cdot 10^{-6}$ ($\Delta T$ = 170C). X-ray diffraction measurements of $\alpha_r$, obtained with the new adapter, are as accurate as dilatometric measurements ($\alpha_d$). Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy institut podshipnikovoy promy*shlennosti (Scientific Research Structural-Technology Institute of the Bearing Industry)

SUBMITTED: 00 ENCL: 01

SUB CODE: GP, OP NO REF SOV: 003 OTHER: 008

Card 2/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AP4020588 S/0037/64/034/003/0558/0561

AUTHOR: Kagan, A.S.

TITLE: Effect of grain orientation on the shape of x-ray diffraction lines

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.3, 1964, 558-561

TOPIC TAGS: x-ray diffraction, x-ray diffraction line profile, grain orientation

ABSTRACT: The effect of grain orientation on the profile of x-ray diffraction lines is discussed. Under the assumption that the primary beam originates at a point focus on the x-ray tube target and is limited by a slit of negligible width but finite height, formulas are derived for calculating the shape of the diffracted line when the nature and magnitude of the grain orientation (distribution of the diffracting normals) is known. As an example, the numerical work was performed for the following case, and the results are presented graphically: Bragg angle - 22°; vertical divergence of the primary beam - 3°; vertical dimension of the illuminated portion of the sample - 2 mm; density distribution of diffraction normals - maximum in the direction of the reflecting normal and falling to half value at 8° therefrom. The effect of grain orientation in this case is considerably to reduce the width of the

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AP4020588

diffraction line: the width at half maximum is reduced by about 14%, and that at one-third maximum by more than 25%. It is concluded that grain orientation cannot be ignored in investigations involving x-ray diffraction line profiles, as, for example, in determinations of the dimensions of mosaic structure. It is necessary either to insure the absence of grain orientation, or to determine the apparatus broadening with the aid of a standard sample having grain orientation similar to that of the specimen under study. An alternative is to minimize the divergence of the primary beam. "In conclusion, the author expresses his gratitude to Prof. Doctor Ya.S.Umanskiy for a valuable discussion of the work." Orig.art.has: 6 formulas and 3 figures.

ASSOCIATION: Zagorskiy filial Vsesoyuznogo podshipnikovogo instituta (Zagorsk Branch of the All-Union Bearing Institute)

SUBMITTED: 04Feb63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: PH NR REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

S/0057/64/034/004/0759/0761

ACCESSION NR: AP4028967

AUTHOR: Kagan, A.S.; Snovidov, V.M.

TITLE: Analysis of the shape of an x-ray diffraction line by the method of moments

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.4, 1964, 759-761

TOPIC TAGS: x-ray diffraction line, x-ray diffraction doublet, x-ray line shape analysis, doublet line shape analysis

ABSTRACT: The analysis of an incompletely resolved doublet by the method of moments is discussed. The two components of the doublet are assumed to have the same shape and to be symmetric (odd central moments vanish). The central moments of the instrumental broadening function are assumed to be known, but an unknown instrumental shift may be present. The unknown doublet separation, relative intensities, instrumental shift, and the even moments of the true line shape can be obtained by solving a sufficient number of the algebraic equations that relate these quantities to the known central moments of the instrumental broadening function and the successive moments of the observed intensity distribution. The first of these equations is derived in detail and the next two are given. [Abstracter's note: It is not dif-



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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACCESSION NR: AP4028967

ficult to write the $n^{th}$ of these equations, but the simultaneous solution of the first several for the separation, shift, and intensities could be troublesome. This is not discussed.7 When the separation and relative intensities are known, the analysis may be completed by the usual Fourier method. Alternatively, one may calculate a sufficient number of the moments of the true line shape and express this shape in terms of Hermite polynomials. Orig.art.has: 12 formulas.

ASSOCIATION: none

SUBMITTED: 30Aug63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 000 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 58996-65 EWT(1)/T/EEC(b)-2 Pi-4 IJP(c) GG

ACCESSION NR: AP5017235 UR/0181/65/007/007/2036/2038

AUTHOR: Kagan, A. S.; Snovidov, V. M.

TITLE: Using the lattice constant to find the distribution function of a material

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2036-2038

TOPIC TAGS: crystallography, crystal lattice constant, distribution function

ABSTRACT: A series of factors which determine local variations in the crystal lattice constant are considered. Such factors include the heterogeneity of the alloy [illegible] during the initial stages of aging, and the [illegible] [illegible] The [illegible] in a [illegible] lead to a change in the form of the [illegible] [illegible] of the [illegible] [illegible] [illegible] the diffraction [illegible] of the material [illegible] the lattice [illegible] [illegible] of the diffract[illegible] curve is given [illegible]

$$[illegible] = \int [illegible](p)\,dp \int f(\xi - kp)\,F(x - \xi)\,d\xi,$$

Card [illegible]

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ACCESSION NR: AP5017295

where $g(p)$ is the distribution function of the material according to the lattice constant or the parameter p which produces a change in the period; $\Delta p$ is the displacement of the diffraction angle corresponding to the given value of the parameter; $f(x)$ is the distribution of the diffraction curve intensity of the reference standard; $F(x)$ is the function of physical widening (due to the fine dispersion and stresses of the second kind). The Fourier transforms of the right and left sides of the above equation yield a system of equations which are used to find the distribution function of the material from the lattice constant. Orig. art. has: 7 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut tekhnologii lakokrasochnykh pokrytiy, Khot'kovo (Scientific Research Institute of Lacquers and Paints Technology)

SUBMITTED: 16Jan65 ENCL: 00 SUB CODE: SS

NO REF SOV: 001 OTHER: 000

Card 2/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 33175-65 EEC(b)-2/EWT(1)/T IJP(c)

ACCESSION NR: AP5005242 S/0167/65/035/002/0355/0358

AUTHOR: Kagan, A.S.; Shovidov, V.M.

TITLE: Concerning the accuracy of the x-ray method of determining crystal lattice fine structure

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.2, 1965, 355-358

TOPIC TAGS: x-ray diffraction, Fourier analysis, crystal lattice defect, crystal lattice distortion

ABSTRACT: The effect of cutting off the tails of the experimental diffraction curves on the determination of crystal lattice fine structure parameters by the Fourier transformation of several orders of reflection, as described by Warren (Uspekhi fiziki metallov /Progress of Metal Physics/ 5, Metallurgizdat, 1963), was [illegible] analysis of a dummy experiment. The first and second order

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ASSOCIATION: none

SUBMITTED: 25Apr64 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 002 OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 25497-66 EWT(1) LHB

ACC NR: AP6011398 SOURCE CODE: UR/0057/66/036/003/0511/0514

44
B

AUTHOR: Kagan, A.S.

ORG: Scientific Research Institute of Paint and Varnish Technology, Khot'kovo (Nanchno-issledovatel'skiy institut tekhnologii lakokrasochnykh pokrytiy)

TITLE: Effect of texture on the positions of x-ray diffraction lines

SOURCE: Zhurnal tekhnicheskoy fiziki, v.36, no. 3, 1966, 511-514

TOPIC TAGS: x ray diffraction, crystal lattice parameter, line broadening, line shift, crystal orientation

ABSTRACT: The author calculates the shift in the center of gravity of an x-ray diffraction line, recorded for a plane sample and employing Bragg-Brentano focusing, due to divergence of the beam, finite width of the detector slit, and "texture" (distribution of crystallite orientation) of the sample. For intermediate results required at several stages of the calculations reference is made to an earlier paper by the author (ZhTF, 34, No.3, 1964). The integrations are performed and the shift is expressed in finite terms for the special case of an axially symmetric texture described by a certain one-parameter bell-shaped distribution function. The resulting shift is presented graphically for several values of the parameters and discussed briefly. The effect of texture decreases rapidly with increasing diffraction angle,

UDC: 548.735

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L 25497-66

ACC NR: AP6011398

but it must be taken into account in precise measurements of lattice constants by the extrapolation method. Orig. art. has: 11 formulas and 2 figures.

SUB CODE: 20 SUBM DATE: 24Apr65 ORIG. REF: 002 OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

Kagan, A.V.

Category : USSR/Nuclear Physics - Structure and Properties of Nuclei C-4

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5996

Author : Kagan, A.V.

Inst : Leningrad Physical-Technical Institute, Academy of Sciences, U.S.S.R.

Title : On the Emission of Neutrons by Short-Lived Active Deposits of Radon

Orig Pub : Dokl. AN SSSR, 1956, 108, No 5, 817-819

Abstract : It is reported that a weak neutron activity (three neutrons per second per millicurie) were observed in ampoules filled with Rn. The initial study of the change of the neutron and $\gamma$ activity with time shows that the neutron emission is connected with RaC ($Bi^{214}$) or by its decay products RaC ($Po^{214}$ and RaC'' ($Tl^{210}$). It was then shown that the neutron emission from the active deposit of Rn cannot be attributed to any secondary reaction whatever. The author proposes that the neutrons are emitted by the RaD excited nuclei formed by the $\beta$-decay of RaC'' (the limiting energy of the partial $\beta$-spectrum should be approximately 100 kev, and the intensity should comprise

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

Category : USSR/Nuclear Physics - Structure and Properties of Nuclei C-4

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5996

$2 \times 10^{-4}$ of the intensity of the fundamental $\beta$ spectrum). Experiments made with compounds enriched with RaC'' gave a value of 1.6 ± 0.3 minutes for the half life $T_{\text{best}}$, which is in agreement with the tabular data, $T_{1/2}$(RaC) = 1.33 minutes.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B

EKSPLUATATSIYA MASHIN V SOTSIALISTICHESKOM ZEMLEDELII (UTILIZATION OF MACHINES IN SOCIALISTIC FARMING, BY) B. G. KAGAN, O. V. MIKELETS, S. A. YAKOVLEVA. MOSKVA, SEL'KHOZGIZ, 1954.

379 P. ILLUS., DIAGRS., TABLES.

"LITERATURA": P. (377)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Turbulent heat exchange between the sea surface and the atmosphere and heat losses through evaporation in Arctic seas. Probl. Arkt. i Antarkt. no.8:78-84 '61. (MIRA 15:3)
(Arctic regions--Ocean temperature)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Heat advection by currents in the Chukchi Sea. Probl. Arkt. i Antarkt. no.9:23-27 '61. (MIRA 15:1)
(Chukchi Sea--Ocean temperature)
(Ocean currents)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Theory of temperature calculations for the active layer of the sea. Trudy GGO no.107:155-168 '61. (MIRA 14:10)
(Ocean temperature)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.; REBENOK, S.P.

Method of calculating stationary currents in case of unstable atmospheric stratification. Okeanologiia 1 no.6:1003-1006 '61. (MIRA 15:1)

1. Leningradskiy gidrometeorologicheskiy institut.
(Ocean currents)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Calculating the friction depth in the sea. Trudy GGO no.127:93-98 '62. (MIRA 15:7)

(Ocean currents)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Theory of steady wind currents of shallow sea. Trudy GGO no.127:99-103 '62. (MIRA 15:7)

(Winds) (Ocean currents)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Stationary drift currents in the deep sea. Okeanologiia 2 no.6:974-980 '62. (MIRA 17:2)

1. Leningradskiy gidrometeorologicheskiy institut.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B. A. UTINA, Z. M.

On the Thermodynamic Interaction Between Sea and Atmosphere

report submitted for the 13th General Assembly IUGG, (Oceangraphy ) Berkeley, California, 19-31 Aug 63

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Thermodynamic interaction in the sea-ice-atmosphere system. Trudy GGO no.144:183-195 '63. (MIRA 17:6)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.; UTINA, Z.M.

Theory of the thermodynamic interaction of the sea and the atmosphere. Okeanologiia 3 no.2:250-259 '63. (MIRA 16:4)

1. Leningradskiy gidrometeorologicheskiy institut.
(Meteorology, Maritime)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

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[illegible], E.[illegible]

Theory of ice crafts in horizontal-stratigenous [illegible]. Trudy GGO no.15[illegible]:30-52 '54. (MIRA 17:7)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Evaluation of the energy dissipation of turbulence in purely drift sea currents. Okeanologiia 4 no.1:3-8 '64. (MIRA 17:4)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Profile of the longitudinal component of the velocity of a tidal current in a deep channel. (Okeanologiia 4 no.5:778-787 '64 (MIRA 18:1)

1. Leningradskiy gidrometeorologicheskiy institut.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.; REBENOK, S.F.

Preliminary calculation of heat balance components of the surface of the Norwegian Sea. Trudy Len. gidromet. inst. no.17:72-88 '64. (MIRA 18:6)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.A.

Influence of the character of distribution of turbulence coefficients in the sea and atmosphere on the profiles of the velocity of drift currents and wind above the sea. Trudy Len. gidrometeor. inst. no.17:128-142 '64.

Vertical velocity of a current caused in the sea by an axisymmetric baric formation. Ibid.:143-149 (MIRA 18:6)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

LAYKHTMAN, D.L., doktor fiz.-matem.nauk, prof.; KAGAN, B.A.

Scheme of precalculating the hydrologic characteristics at the sea surface. Meteor. i gidrol. no.5:7-13 My '65.

(MIRA 18:4)

1. Glavnaya geofizicheskaya observatoriya i Leningradskiy gidrometeorologicheskiy institut.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 2358-66 EWT(1)/ GW

ACCESSION NR: AP5021871

UR/0362/65/001/008/0845/0852
551.465.73

AUTHOR: Kagan, B. A.

55

TITLE: Application of the quasi-stationary model of the interaction between atmospheric and oceanic boundary layers in computation of water temperature and currents in the Northern Atlantic

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 8, 1965, 845-852

TOPIC TAGS: ocean current, hydrology, boundary layer

12,55

ABSTRACT: The fallacy of the presently accepted method for determining water temperature and drift current speeds in the ocean is discussed, and a quasi-stationary model of the interaction of the atmospheric and oceanic boundary layers is proposed for a study of the North Atlantic in the mean winter period. In this procedure only the external parameters of the system (values of the meteorological elements in the free atmosphere and hydrological elements in the deep layer of the sea) must be known. These may be obtained from observations of the wind velocity, temperature, and moisture content in the atmosphere (Marine Climatic Atlas of the World, 1, North Atlantic Ocean, 1955), from data of the temperature

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L 2358-66

ACCESSION NR: AP5021871

6

and salinity of the deep layers of the oceanic water, collected by A. M. Muromtsev (Osnovnyye cherty gidrologii Atlanticheskogo okeana. Gidrometeoizdat, 1963), and from the reported calculations of the radiation balance (Atlas teplovogo balansa (pod red. M. I. Budyko). Gidrometeoizdat, 1963). Results of the calculations of the speed and direction of the surface drift currents are shown in Fig. 1 on the Enclosure. Comparison of the calculated and observed surface temperatures at various points of the Northern Atlantic agree closely. Calculations were performed by a graduate student of LOMI, O. A. Andreyev. Orig. art. has: 3 figures and 28 formulas.

ASSOCIATION: Leningradskiy gidrometeorologicheskiy institut (Hydrometeorological Institute)

55

SUBMITTED: 15Jan65 ENCL: 02 SUB CODE: ES

NO REF SOV: 011 OTHER: 002

Card 2/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

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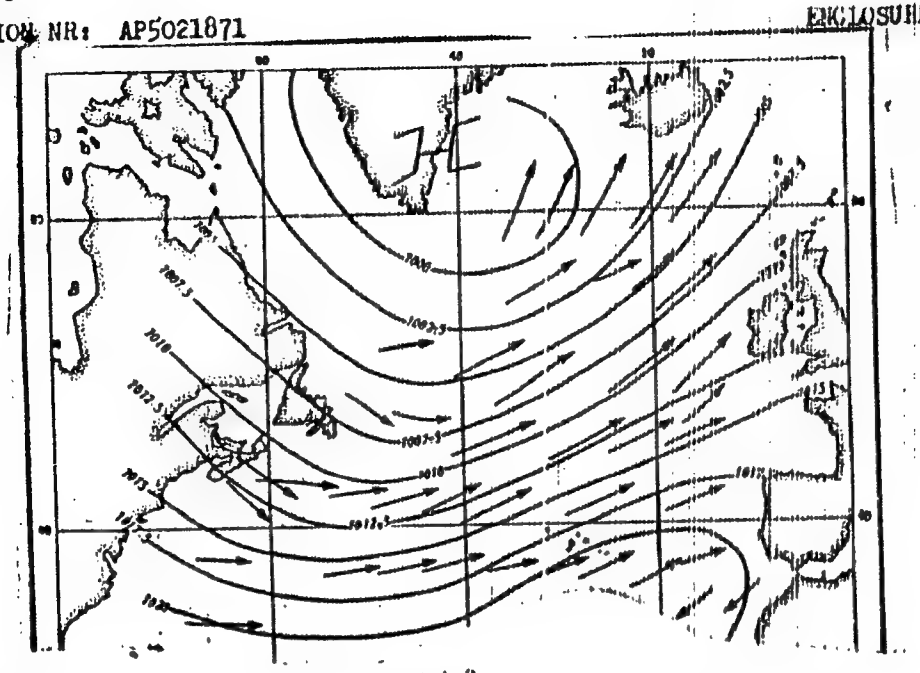
L 2358-66

ACCESSION NR: AP5021871

ENCLOSURE: 01



Card 3/4

To card 4/4

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L 2358-66

ACCESSION NR: AP5021871 To card 3/4 ENCLOSURE: 02

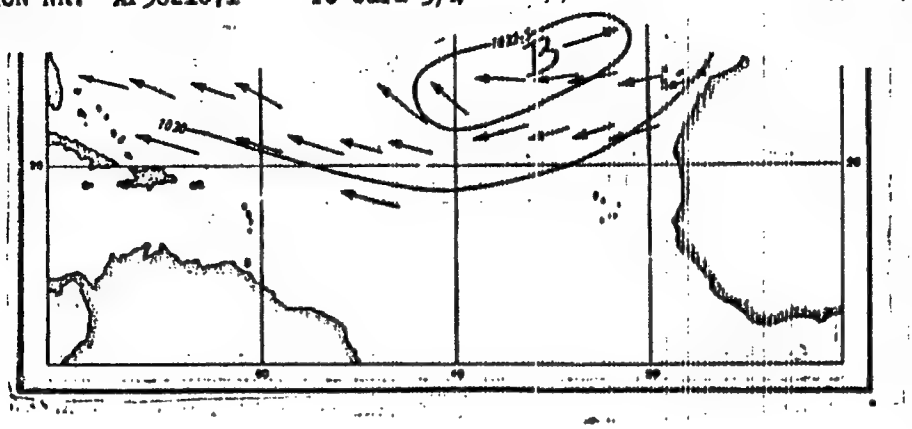


Fig. 1. Results of calculations of the current speed and directions. Solid lines represent average isobars at sea level during the investigated period

Card 4/4

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KAGAN, B.A.; MENZIN, A.B.

Velocity profile of a tidal current in the sea. Trudy GOIN no.85:35-44 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 14187-66 EWT(1)/FCC GW

ACC NR: AT6004150 (N) SOURCE CODE: UR/2531/65/000/167/0053/0058

36

B+1

AUTHOR: Bogdanova, G. V.; Kagan, B. A.

ORG: Main Geophysical Observatory, Leningrad (Glavnaya geofizicheskaya observatoriya)

TITLE: Experiment in calculating the characteristics of thermal and dynamic interaction between sea and atmosphere

12,55 12,44,55

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 1, 1965. Fizika pogranichnogo sloya atmosfery (Physics of the boundary layer of the atmosphere), 53-58

TOPIC TAGS: meteorology, computer application, atmospheric interaction

ABSTRACT: A theoretical study of thermal and dynamic interaction between sea and atmosphere is used as a basis for programming a digital computer to calculate the distribution of the characteristics of interaction between sea and atmosphere along the Meridian section between the tropical Atlantic and the North Pole. A block diagram of this program is given for a three-address computer with floating decimal

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L 14187-66

ACC NR: AT6004150

point. The program includes calculation of the altitude of the boundary layer, depth of the friction layer, temperature of the active surface, coefficients of turbulence in the atmosphere and sea, components of velocity of the surface friction, and turbulent heat exchange and heat losses through evaporation for the various seasons of the year. Curves are given showing the results of calculations of these characteristics for winter. A comparison of theoretical and experimental data shows satisfactory agreement for surface temperature which is a good indication that the other characteristics are also reliable. The proposed computer program may be used for solving various problems in interaction between sea and atmosphere. Orig. art. has: 3 figures, 6 formulas.

SUB CODE: 08,09/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 35994-66 EWT(1) GW (N) SOURCE CODE: UR/2634/65/000/085/0035/0044
ACC NR: AT6016538

23
B+1

AUTHOR: Kagan, B. A.; Menzin, A. B.

ORG: None

TITLE: The velocity profile of the tidal current in the sea 12

SOURCE: Moscow, Gosudarstvennyy okeanograficheskiy institut. Trudy, no. 85, 1965. Teoriya i metody raschetov techeniy i neperiodicheskikh kolebaniy urovnya i prilivov (Theory and methods of calculating currents and acyclic fluctuations of water level and tides), 35-44

TOPIC TAGS: flow velocity, ocean current, ocean tide, ocean floor topography

ABSTRACT: One of the present authors earlier formulated the problem of the velocity distribution in the tidal current in the sea (B. A. Kagan, Okeanologiya, vol. 4, no. 5, 1964). On physical grounds Kagan came to the conclusion that the entire depth of the sea water may be divided into three layers. Expressions for the calculation of the velocity profile of tidal current in the sea have been derived on the basis of the solutions of the equations of motions. The purpose of the present article is to establish the relationships between the velocity distribution of the tidal current and the horizontal pressure gradient,

Card 1/2

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L 45291-66 EWT(1) GW

ACC NR: AP6020980 (N) SOURCE CODE: UR/0213/66/006/003/0408/0415

22
21
B

AUTHOR: Kagan, B. A.

ORG: Leningrad Hydrometeorological Institute (Leningradskiy gidrometeorologicheskiy institut)

TITLE: Horizontal turbulent exchange in calculating tidal oscillations of the sea level by the numerical method

SOURCE: Okeanologiya, v. 6, no. 3, 1966, 408-415

TOPIC TAGS: ocean tide, tidal oscillation, ocean current, wave velocity, Coriolis force

ABSTRACT: The problem of tidal oscillations of the sea level and currents in the open sea has been analyzed in consideration of horizontal turbulent exchange. Such exchange appears to be inevitable in the deep ocean areas of "critical" latitudes where the value of the wave velocity coincides with the Coriolis parameter. A method has been suggested for calculating tides with varying depths of the sea. A

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

L 06103-67 EWT(1) GW

ACC NR: AP6019515 (N)

SOURCE CODE: UR/0362/66/002/002/0174/0182

AUTHOR: Kagan, B. A.; Nekrasov, A. V.; Tamsalu, R. E.

ORG: Leningrad Hydrometeorological Institute (Leningradskiy gidrometeorologicheskiy institut)

TITLE: The influence of horizontal turbulent friction on tidal fluctuation at sea level

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 2, 1966, 174-182

TOPIC TAGS: hydrometeorology, turbulent flow, ocean current, ocean dynamics, ocean tide

ABSTRACT: A study is made of the influence of horizontal turbulent exchange on tidal fluctuations in the level of the Yellow Sea. It is established that a consideration of the horizontal turbulent exchange can be used to introduce a considerable degree of correction into calculated tide levels. Consideration of horizontal turbulent flow will not, however, lead to a basic change in tidal phenomena calculated for the Yellow Sea. Analysis of the results shows that the amphidromic points of the waves are displaced toward the center of the basin when horizontal turbulent exchange is considered. This causes the amplitudes of tide in the central portions of the basin to decrease, while tidal amplitudes at the northern and southern ends increase.

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L 06103-67
ACC NR: AP6019515

Horizontal turbulent exchange causes a smoothing of transverse curvature. The influence of horizontal turbulent exchange leads to a reduction in the effect of depth variability. Orig. art. has: 5 formulas, 6 figures, and 1 table.

SUB CODE: 08/ SUBM DATE: 11May65/ ORIG REF: 005/ OTH REF: 007

Card 2/2 YC

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

SOURCE CODE: UR/0362/66/002/008/0883/0890

ACC NR: AP7006054

AUTHOR: Kagan, B. A.

ORG: Leningrad Hydrometeorological Institute (Leningradskiy gidrometeorologicheskiy institut)

TITLE: Tides in a nonhomogeneous sea

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 8, 1966, 883-890

TOPIC TAGS: ocean tide, ocean current

ABSTRACT: The author has derived and analyzed expressions for the amplitudes of the oscillations of the velocity components of a tidal current and density at different depths in a continuously stratified sea. Although the formulas for computing the velocity of the tidal current at the surface of a stratified sea coincide with the formulas for computing velocity in a homogeneous sea, the absolute velocities obtained in both cases are different. It can be expected that the current velocities at the surface of a stratified sea will be somewhat less than the velocities of the tidal current at the surface of a homogeneous sea because despite the same boundary conditions the amplitudes of the oscillations of the surface of a stratified sea are less than the corresponding amplitudes in a homogeneous sea. The fact that on the sea floor the velocity of

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ACC NR: AP7006054

the tidal current remains a finite value is attributed to the lack of an allowance for vertical turbulent viscosity. When the latter is taken into account the horizontal components of velocity of a tidal current on the sea floor become equal to zero, and this leads to a displacement of the velocity maximum to some intermediate depth. Thus, in a sea with continuous distribution of density the velocity of the tidal current increases with an increase of depth at first, then attains a maximum at some intermediate depth, and then decreases with approach to the bottom, becoming equal to zero at the bottom. Observations of the vertical profile of the velocity of the tidal current in the real sea confirm this conclusion. The author thanks P. S. Lineykin for valuable observations and advice. Orig. art. has: 1 figure and 31 formulas. [JPRS: 38,677]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

ACC NR: AP7004248 SOURCE CODE: UR/0106/67/000/001/0014/0022

AUTHOR: Kagan, B. D.; Fink, L. M.

ORG: none

TITLE: Method of serial reception in the whole for the codes permitting majority decoding

SOURCE: Elektrosvyaz', no. 1, 1967, 14-22

TOPIC TAGS: binary code, signal reception, majority decoding, digital information, signal noise separation

ABSTRACT: Possibility of suboptimal reception is considered for the codes permitting majority decoding; their trinomial check equations do not intersect. Transmission is examined of discrete information coded in a binary systematic (n, k) code which permits setting up (for each information symbol $x_i$) r nonintersecting equations that express $x_i$ through other symbols of the form

$$\left.\begin{aligned} x_i &= x_i \\ x_i &= x_{i1} + x_{i2} \\ x_i &= x_{i1} + x_{i3} \\ &\cdots\cdots\cdots \\ x_i &= x_{r1} + x_{r2} \end{aligned}\right\},$$

where modulo 2

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addition is performed. Higher fidelity of reception can be theoretically ensured by using total ("in the whole") information for decoding. However, such a system is practically difficult to materialize. Hence, the information symbols $x_1, \ldots, x_k$ are found through analyzing the values of received signals $\eta_1, \ldots, \eta_n$ (a suboptimal system), with each $x_i$ being determined by an algorithm which is a continuous analog of the discrete algorithm of majority decoding. Formulas for the decision-system algorithm are derived. Signal-noise separation is explored for a cyclic (7, 3) code and for a recurrent code. Orig. art. has: 3 figures and 43 formulas.

SUB CODE: 09, 17 / SUBM DATE: 09Jul66 / ORIG REF: 004 / OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.G.

[Organization and technology of tractor work] Organizatsiia i tekhnologiia proizvodstva traktornykh rabot. Moskva, Gos. izd-vo selkhoz lit-ry, 1956 389 p. (MLRA 10:5)
(Tractors)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.G.

[Principles of safety engineering and fire prevention in agriculture] Osnovy tekhniki bezopasnosti i protivopozharnoi tekhniki v sel'skom khoziaistve. Moskva, Gos. izd-vo selkhoz lit-ry, 1958. 231 p. (MIRA 12:1)
(Fire prevention) (Agriculture--Safety measures)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, L.

F

M

2568. CORROSION OF PUMP DISCS IN ACID WASHING OF THERMAL POWER EQUIPMENT. Kagan, D. (Za Ekon. Topliva (Fuel Econ.), Jan. 1951, 31-32).

The metal of pump discs which are used in acid washing is subjected to severe treatment, as in addition to the corrosive action of the acid, they have to withstand the impact effect of the liquid, and there is also the possibility of rapid extraction from the surface of the metal hydrogen formed in the corrosion process. Results of tests on metals disclose that bronze and cast iron are the most readily attacked. Satisfactory corrosion resistance is shown by certain types of alloy steels and brass. (L).

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

NAGAH, E.

Sum. Vektor. Tensor. Analiz. [illegible] (1919)
Rachevsky [illegible] 115-142 (1919), and I. Shapiro [illegible]
[illegible]

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

Source: Mathematical Reviews, Vol. 11 No. 1

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

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15,6800

69945

S/105/60/000/04/007/024
B007/B008

AUTHORS: Kagan, B. M., Doctor of Technical Sciences, Urman, Ye. L., Candidate of Technical Sciences

TITLE: Selection of Differential Equations for Transients of a Synchronous Generator in Investigating the Dynamic Stability on Computers

PERIODICAL: Elektrichestvo, 1960, Nr 4, pp 37 - 42 (USSR)

TEXT: The results of investigations with the aid of the digital computer M-3 are given here. These investigations had the purpose of clarifying the influence of various factors such as saturation, attenuation system, transformer emf in the stator windings, etc. on the calculated value of the dynamic stability limit in the first oscillation cycle. The investigations were based on the method of computing the dynamic stability limit on automatic digital computers described in the paper (Ref 2). This machine searches automatically two limiting values of the angle δ, and of the power transmitted for operation before the disturbance, respectively. These two values differ, at the most, by the predetermined amount, and satisfy the condition as follows: the generator keeps its stability in the first oscillation cycle for the lower limiting value of δ while the generator falls out of step at the higher limiting value. The transmitted power corresponding to the lower limiting value of the angle δ is considered as the limit of dynamic

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69945

Selection of Differential Equations for Transients of a Synchronous Generator in Investigating the Dynamic Stability on Computers

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B007/B008

stability. The fact that the computation result is marked by a figure, the dynamic stability limit, is the advantage of this method. The circuit for computing the transmission is shown in figure 1. The case of a short circuit in 3 phases with a duration of $t_{\text{short circuit}} = 0.12$ seconds in the first section behind the transformer, with following switch-off of the damaged section of one circuit, is investigated. Equations (1) to (12) - a complete system of equations by Gorev-Park - are written down for the transients of a synchronous machine. The method by Runge-Kutt (Ref 2) was used for numerical integrating on the automatic digital computer. The programs for the digital computer and the computations on the M-3 were carried out by A. P. Rozentsveyg. A comparison of the results obtained shows that at the short circuit in 3 phases near the generator the saturation of the generator exerts the highest influence on the dynamic stability of a generator feeding the rails of infinite power over a long-distance power line. It is pointed out in this connection that the statement made in the paper (Ref 3) regarding the slight influence of saturation on the character of the variation of angle δ in the first oscillation cycle, and on the dynamic stability limit to be determined after the first cycle, does not conform to the results obtained

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69945

Selection of Differential Equations for Transients of a Synchronous Generator in Investigating the Dynamic Stability on Computers

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B007/B008

here. A comparison of the computations by the complete equations by Gorev-Park with the computations by the simplified equations which do not consider the stator emf shows that the consideration of this emf widens the limit of dynamic stability by 1.5%. The computations also showed that a consideration of the attenuation system exerts little influence on the stability limit in the case investigated here. There are 4 figures, 2 tables, and 4 Soviet references.

ASSOCIATION: VNIIEM (VNIIEM)

SUBMITTED: July 17, 1959

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.M.

SA

621.398 : 621-526

3460 . Theory of the synchronous Selsyn transmission of the angle and of rotation with a transmitter and receiver of differing parameters. Josifyan, A. G. and Kagan, B. M. Vestn. Elektroprom., 20 (No. 4) 14-17 (April, 1949) In Russian.- A treatment of the 3-ph. case of Selsyn transmission. The synchronising torques are calculated on approximate formulae and

It is claimed that for low-power Selsyn-receivers of the indicator type the experimental data agree satisfactorily with calculations. 5260 B. F. K.

Cand. Tech. Sci.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.M.(Moskva); NARSIDZE, K.M. (Moskva)

Two-phase asynchronous motors with thin-walled rotors used as servomotors and speed-voltage generators. Avtom. i telem. 14 no.2:177-187 Mr-Ap '53. (MIRA 10:3)
(Servomechanisms) (Electric motors, Induction)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

IOSIF'YAN, Andronik Gevondovich; KAGAN, Boris Moiseyevich; MAR'YAKOVSKIY, D.I., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor.

[Principles of servomechanisms] Osnovy sledianshchego privoda. Moskva, Gos. energ. izd-vo, 1954. 596 p. (MLRA 7:12)
(Servomechanisms) (Automatic control)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B. M.

O Shastotnom Metode Opredeleniia Protsessnykh Peredtodnot Funktsii. B. M. Kagan. Avtomatika i Telemekhanika, Nov., 1953, pp. 1,034-1,037. In Russian.

Development of a frequency method for determining transient oscillation of stable systems.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.M. (Moskva).

Frequency method of determining the derivatives of transfer functions. Avtom.i telem.17 no.11:1035-1037 N '56. (MLRA 9:12)
(Frequency curves) (Functions)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.M., kandidat tekhnicheskikh nauk.

High-speed digital computers. Vest.elektropron. 27 no.6:3-16 Je '56. (MLRA 10:8)

1.Nauchno-issledovatel'skiy institut Ministerstva elektrotekhnicheskoy promyshlennosti.
(Electronic calculating machines)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN, B.M.

KAGAN, B.M., kandidat tekhnicheskikh nauk.

Transient processes in a servo actuator with self-saturating transductor. Vest. elektroprom. 27 no.10:43-49 O '56. (MLRA 10:9)

1. Nauchno-issledovatel'skiy institut Ministerstva elektrotekhnicheskoy promyshlennosti.

(Servomechanisms)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

AUTHOR: Kagan, B.M., Candidate of Technical Sciences. 110-10-2/18

TITLE: Calculation of the Stability of Electrical Automatic Control Systems with the Aid of Digital Computers. (Raschet ustoychivosti elektricheskikh sistem avtomaticheskogo regulirovaniya pri pomoshchi tsifrovykh vychislitel'nykh mashin)

PERIODICAL: Vestnik Elektropromyshlennosti, 1957, Vol.28, No.10, pp. 2 - 9 (USSR)

ABSTRACT: Digital computers may be used for the numerous calculations involved in the design and analysis of the stability of complex dynamic systems. This article describes the programme used in the computing laboratory of the Scientific Research Institute of the electro-technical industry when making calculations on the stability of automatic control systems on computer type M-3 which was developed by members of the Institute working in collaboration with LUMS of the Academy of Sciences of the USSR under the leadership of I.S. Bruk, Corresponding Member of Ac.Sc.USSR. The procedure for determining the regions of stability on a computer was first developed in the Ac.Sc. Ukrainian SSR and a number of special features of this procedure are used in our programme. However, the programme here described differs in that the point of departure for machine calculations is a system of first approximation equations in normal form; from

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110-10-2/18

Calculation of the Stability of Electrical Automatic Control Systems with the Aid of Digital Computers.

of non-linear dynamic systems with large changes in the variables, provided that the initial differential equations of the systems remain valid. However, the determination of the Lyapunov functions is often difficult and consideration is then limited to determining the stability with only small deviations of the variables by examining linearised differential equations of the system or "equations of the first approximation". A.M. Lyapunov gave the first strict definition of the conditions under which these equations may be used. If the linearised differential equations of the system have a characteristic equation of which the real parts of the roots are negative, then undisturbed motion is stable; if even one root has a positive real part motion is unstable. When some of the roots are zero and the remainder negative, the stability of the system cannot be evaluated from equations of the first approximation and the non-linear terms must be taken into account. Criteria exist to determine whether the real parts of the roots of the characteristic equation are negative without actually solving the equation. Various types of criterion are available but algebraic criteria are the most convenient for use with computers and, in particular, the Raus criterion is convenient if the equation is of higher degree than

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Calculation of the Stability of Electrical Automatic Control Systems with the Aid of Digital Computers.

squares and the machine first finds the location of the highest square within the boundary and then goes round the squares in turn, determining which are inside and which are outside the boundary. The procedure is illustrated in Fig. 2. Simpler methods of going round the boundary are possible, but the one described is universal. The sequence of operations and possible simplifications are described. The logical scheme of a programme of calculation of the boundary of the region of stability and of lines of equal degrees of stability is illustrated in Fig. 3. In this figure, the dotted lines indicate operators containing the logical conditions that are essential for finding and going round the boundaries of the region, but which are not shown separately in order to simplify the diagrams. The scheme is then explained at length including the meaning of the various operators. These are used in turn as the initial point on the boundary is first found and then the contour is followed. The operations finish with a check that the boundary has been completely determined.

Computer M-3 requires about six minutes to determine the characteristic determinant of the 7th order and one minute to check the Raus criterion. In computers without internal high



mission line, when the generator excitation is controlled by a controller that reacts to deviation of the current and its first and second differential coefficients, as determined on a machine type M-3. The calculations were based on the constants of a model of the transmission line constructed in the Moscow Power Institute (MEI) and the curves correspond to the

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 the line operating on busbars of infinite power at angles from



Calculation of the Stability of Electrical Automatic Control Systems with the Aid of Digital Computers.

30° to 120°. It will be noticed that the curves are not concentric but are concentrated towards the left and this must be taken into account in adjusting the controller.

A brief appendix describes Danilveskiy's method of calculating the coefficients of the characteristic equation from the characteristic determinant.

There are 4 figures and 7 Slavic references.

ASSOCIATION: Scientific Research Institute of the Electro-technical Industry. (NII EP)

SUBMITTED: June 8, 1957

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

Kaganov, B.M.

SUBJECT: USSR/Dialectic Materialism 25-4-1/34

AUTHOR: Kaganov, B.M., Candidate of Philosophic Sciences

TITLE: V.I. Lenin on the Significance of Dialectic Materialism for the Development of Natural Sciences (V.I. Lenin o Znachenii Dialekticheskogo Materializma dlya Razvitiya Yestestvoznaniya)

PERIODICAL: Nauka i Zhizn, April 1957, # 4, pp 1-3 (USSR)

ABSTRACT: Dialectic Materialism was created by Marx and Engels and developed by Lenin in new historical circumstances. Lenin has shown that intentional application of dialectic materialism to the phenomena of nature may open immense possibilities for the natural sciences. The idealistic theories of the bourgeois scientists were shattered by Lenin's book "Materialism and Empiric Criticism" wherein he points out the achievements made by natural sciences when based on Dialectic Materialism. This has been lately confirmed by numerous Soviet and Western scientists as e.g. I.V. Michurin, K.A. Timiriazew, N.N. Burdenko; F. Joliot-Curie, J. Bernal and many others. The theories and discoveries of contemporary Western scientists are invariably interpreted idealistically by bourgeois philosophers, thus acting in the

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BELYNSKIY, V.V., inzh.; DOLKART, V.M., inzh.; KAGAN, B.M., kand. tekhn. nauk; LOPATO, G.P., inzh.; MATYUKHIN, N.Ya., inzh.; BRUK, I.S., red.; MORDVINOVA, N.P., inzh., ved. red.; SHTEYNBOK, G.Yu., insh., red.; FOMICHEV, P.M., tekhn. red.

[Small M-3 electronic computer] Malogabaritnaia elektronnaia vychislitel'naia mashina M-3. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1957. 86 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt, tema 40) (MIRA 14:11)

1. Chlen-korrespondent AN SSSR (for Bruk).
(Electronic calculating machines)

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PHASE I BOOK EXPLOITATION SOV/4111

Konferentsiya po voprosam teorii i primeneniya diskretnykh avtomaticheskikh sistem, Moscow, 1958

Teoriya i primeneniye diskretnykh avtomaticheskikh sistem; trudy konferentsii (Theory and Application of Discrete Automatic Systems; Transactions of the Conference) Moscow, AN SSSR, 1960. 572 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Nauchnyy sovet po avtomaticheskomu upravleniyu. Institut avtomatiki i telemekhaniki.

Editorial Board: M.A. Gavrilov, Doctor of Technical Sciences, Yu.V. Dolgolenko, Doctor of Technical Sciences, V.A. Kotel'nikov, Candidate of Technical Sciences, A.Ya. Lerner, Doctor of Technical Sciences, I.S. Korosamov (Scientific Secretary), G.S. Pospelov, Doctor of Technical Sciences, A.A. Fel'dbaum, Doctor of Technical Sciences, A.V. Khramoy, Candidate of Technical Sciences, and Ya.Z. Tsypkin, Doctor of Technical Sciences; Resp. Ed.: Ya.Z. Tsypkin, Doctor of Technical Sciences; Ed. of Publishing House: M.I. Podgaytsaiy; Tech. Ed.: S.G. Markovich.

PURPOSE: These transactions are intended for the members of the conference and other specialists in automatic control.

COVERAGE: The Conference on the Problems of Theory and Application of Discrete Automatic Systems took place in Moscow from September 22 to 26, 1958. It was the first conference devoted to discussions of the present status of the theory and techniques of discrete automatic systems and to planning for future development. The papers discussed at the conference have been divided into four groups. In the first group optimization switching circuits are discussed as well as methods of relay control systems, in particular plant lag control systems in which are realized optimal processes as to quick response. The second group of papers is devoted to the analysis and synthesis of pulse systems with variable parameters, of pulse systems with several pulse components, to the study of self-oscillation phenomena in nonlinear pulse systems, and to the methods of calculating linear pulse systems. Problems of simulating pulse systems and descriptions of some pulse regulators have also been included. The third group of papers deals with digital systems. Problems of using elements of digital technique and digital computers for the automation of various fields of engineering, i.e., power engineering, mining, radio communication, metallurgy, etc., are discussed. Problems of analog-digital conversion and vice versa as well as problems of developing specialized functional converters have been included in this group. The fourth group of papers includes theoretical elements and certain practical applications of the simplest types of self-adjusting systems, optimalizing control systems, which are developed as relay, pulse and digital devices. There are also found papers describing various methods of investigating steady state conditions in optimalizing systems, results of studies of the effects of random factors on the process of automatic searching, and examples of existing optimalizing control systems. Some of the more interesting communications and observations made during the discussion of the various conference papers have also been included in the Transactions. Personalities and references accompany most of the papers.

Yartsev, Z.B. (Moscow). Discrete Control Machine For a Blooming Mill 281
This article describes a programmed control machine being developed for the automatic control of rolling mill processes. There are no references.

Kagan, B.M., V.M. Dolkart, A.I. Voitsekov, and B.P. Sovetov (Moscow). A Complex Dis-Pete-Continuous Installation for the Investigation of Processes in Control Systems With Digital Control Machines 283
The article describes some units of a high-speed discrete controlling computer. There is 1 Soviet reference.

Sigov, B.A. (Kiyev). Comparative Investigation and Development of Components of Position, Integral, and Speed Systems in Digital Programmed Control 296
The author presents a comparative study of control systems using digital programmed control, such as position systems with pulse-numerical code circuits and with binary code and integral systems with discrete and with continuous stimuli and with a frictional integrator. There are 5 references: 4 Soviet (including 1 translation), and 1 English.

Zavelskin, A.E. (Moscow). Classification of Converters of a Continuous Quantity into a Numerical Equivalent 314
This is a classification of analog-to-digital converters. There are 14 references: 1 Soviet and 13 English.

KAGAN, B.M.

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PHASE I BOOK EXPLOITATION SOV/1237

Kagan, Boris Moiseyevich and Ter-Mikaelyan, Teodor Mikhaylovich

Resheniye inzhenernykh zadach na avtomaticheskikh tsifrovykh vychislitel'nykh mashinakh (Solution of Engineering Problems by Means of Automatic Digital Computers) Moscow, Gosenergoizdat, 1958. 174 p. 10,000 copies printed.

Ed.: Kurochkin, V.M.; Tech. Ed.: Larionov, G.Ye.

PURPOSE: The book is intended for scientific personnel, engineers, and graduate and senior students of vuzes.

COVERAGE: The authors describe the application of automatic digital computers for engineering calculation and analysis. They discuss the principle of operation of computers and describe methods of programming mathematical problems and methods of approximate calculation. They also present examples of employing automatic digital computers in solving general engineering problems, such as the analysis of transients in long-distance power transmission, calculation of automatic control system stability, determination of critical speed of turbogenerator rotors, and searching

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

SOV/110-58-9-5/20

AUTHORS: Professor Sorker, (Doctor of Technical Science) and Kagan, B.M. (Candidate of Technical Science)

TITLE: The use of Computers for Designing a Series of Electrical Machines (O primenenii elektronnykh vychislitel'nykh mashin dlya raschetov seriy elektricheskikh mashin)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 9, pp 17-25 (USSR)

ABSTRACT: Designing a series of electrical machines involves much calculation and it has not hitherto been possible to work out in full detail which is the best design for each machine in the series. The application of computers to the problem alters the situation. Computer mark M-3 was introduced in 1956 and was used to design a series of d.c. and a.c. machines. In this early work the possibilities of the computer were not fully used, because the programming was inadequate and much of the computer time was occupied with feeding in programmes. A new design procedure was required to fit the computer. Another series of synchronous machines was then designed by computer, and in this case the restrictions imposed on the computer and the useful data obtained were more complete than before. However, the possibilities of the computer were still not fully exploited. American work on the subject published

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The use of Computers for Designing a Series of Electrical Machines

in 1957 was also incomplete. In 1957 it was decided to design a series of induction motors of up to 100 kW and accordingly the procedure for applying computers was considerably developed. This article discusses some specific problems of the application of computers to machine design, such as the method of finding the best variant, and programming. It does not go fully into the criteria used to assess the machines or the design formularies used in the work. In designing a series of machines on a computer the problem must be presented in such a way that the computer proceeds logically from one design variant to another, compares them and selects the best. The criterion used to determine the best variant may be the overall cost, with or without the capitalised value of the losses. In addition, a number of limiting criteria are introduced and those chosen were the maximum torque, the stator temperature-rise and the power factor; these are expressed in equations (2). Certain design limitations were also applied to make the individual motors form a series, for example the core diameter. The different types

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The use of Computers for Designing a Series of Electrical Machines

of design problem involved in designing a series of motors are then discussed and a number of particular design conditions that were introduced are recounted. The mathematical treatment of the formulation of the design problem is then given and it is shown, with reference to Figs 1-4, that non-linear programming is involved, for which there is no general solution. The method of finding the best variant on the computer is then described. A logical method of programming the design of induction motors is offered. The initial data are: the useful power; the number of poles; the number of parallel windings; the numbers of stator and rotor slots; the stator winding-factor; the length of the air gap; the stator winding pitch; a table of wire diameters; and polynomials for the magnetisation curves of different parts of the magnetic circuit. Limiting values are set on the power-factor, the torque factor, the stator temperature-rise and some other properties. The method of logical search for the best design is then represented by a chart in Fig 6, though in point of fact the procedure is somewhat more complicated than shown therein because of various

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The use of Computers for Designing a Series of Electrical Machines

steps that are taken to save time. The programme described occupies 1,100 memory cells, and in each design of a new type of motor 22 constants are changed. The checking calculations occupy about 45 seconds on the computer M-3. The derivation of forty design formulae takes 4 minutes. It takes about an hour to find the best variant, and during this time between sixty and eighty designs are made. The complete design consists in seeking the best variant in 36 planes of air-gap induction and conductors-per-slot, and takes about 36 hours machine time.

There are 6 figures and 2 references, 1 of which is Soviet.

SUBMITTED: May 15, 1958

1. Electrical equipment--Design 2. Mathematical computers--Applications 3. Mathematical computers--Performance

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KAGAN, S.D.

PHASE I BOOK EXPLOITATION SOV/4553

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Sud, and E.F. Silayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy

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16.8000 (1121, 1132, 1329)

AUTHORS: Kagan, B.M., Dolkart, V.M., Voitelev, A.I. and ~~Brudnyy, B.P.~~

TITLE: A complex digital computer installation for investigating processes occurring in control systems with digital control machines

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 4, 1961, 21, abstract 4 B160 (V sb. Teoriya i primeneniye diskretn. avtomat. sistem, M., AN SSSR, 1960, 288-295)

TEXT: A description is given of a complex computer installation comprising the general purpose computer type M-3, general purpose electronic computer type MH-8(MN-8), and a two-way data converter for the analog and digital forms of information. The installation is intended for simulating complex automatic systems, consisting of a controlled object (analog part) and a controlling digital ma-

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A complex digital computer...

chine. In an exploratory system comprising a closed circuit, the object and the digital machine are tied together by means of the digital-analog and analog-digital converters. In this system the task of the digital machine is to process the object's output measured at some instant of time, and to prepare the instructions which are then sent to the object via converters. It is assumed that after having received the data from the object, the digital machine continues to process the data for a certain defined time interval after which, it suddenly changes its output control instructions. Then begins the "control cycle", at the end of which a new reading is taken from the object and a new computing cycle is initiated by the digital machine. In the present complex installation the object is simulated by the installation MN-8 and the function of the calculating machine is performed by the installation M-3. It may be noted that in general there exist three different operating conditions for the kind of installation considered. If the digital computer has the same speed of functioning as the analog computer, the operation is carried out in the real time scale. If the speed

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A complex digital computer...

of the digital computer is low, the time scale of the MN-8 can be adjusted. Finally, if the required adjustment of the time scale is technically impossible, the analog computer can be made to operate with the intermission of solution. For the present installation the second type of operation has been selected. This type of operation has been selected. This type of operation permits in particular the use of only one analog-digital and one digital-analog converter, since individual translations can be performed and stored in a sequential manner. Converter connection to an arbitrary channel of a variable is effected by means of a special switch based on the step selector, type ШУ (ShI)25/8. The analog-digital converter (voltage binary code) utilizes the principle of the "balancing currents" in a circuit with feedback, and has seven binary divisions. For the reverse translation, the current addition circuit in the decision unit is used. In order to enable the use of the computer M-3 in the present installation, two operations had to be added to it, viz., "direct translation" and "reverse translation". In the address part for this instruction, the address of the subsequent

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910009-6

KAGAN B.M.

Vsesoyuznoye ob'yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, S.A. Ginzburg, and M.G. Chilikin; Eds.: I.I. Sud, and E.P. Blagov; Tech. Eds.: E.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the VZLIEM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Sektsiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to non-contact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of RII KP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL


Kagan, B.M., Doctor of Technical Sciences, T.C. Sorokin, Professor, Doctor of Technical Sciences, Yu.V. Mertinov and Ye.B. Plamod'yalo, Engineers. Automation of the Calculations of Electric Drives by Means of Electronic Digital Computers* 41

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KAGAN, B.M., doktor tekhn.nauk; URMAN, Ye.L., kand.tekhn.nauk

Use of digital computers for calculating transient processes in synchronous machinery using differential equations with periodic coefficients. Elektrichestvo no.4:43-48 Ap '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki.
(Electronic digital computers)
(Electric machinery)

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C111/C444

AUTHOR: Kagan, B. M.

TITLE: The solution of problems of non-linear programming on digital computing machines

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 76, abstract 5V448. ("Primeneniye vychisl. tekhn. dlya avtomatiz proiz-va," M., Mashgiz, 1961, 140-164)

TEXT: Considered are systems of automatic controlling device and servo-mechanism. One points to the actuality of the development of computing methods for optimal systems of the automatic controlling device and servomechanism. Ordinarily the characteristic of the quality of a system of automatic controlling device and servomechanism (e. g. efficiency, exactness, economy, reliability etc.) is a non-linear function of certain unknown parameter which are determined out of the demand that the characteristic of the quality be optimal under given suppositions. The determination of an optimal system of the automatic controlling device and servomechanism is an ordinary problem of non-linear programming. In this article one describes well-known methods by aid of which

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AUTHOR: Kagan, B.M., Doctor of Technical Sciences, Professor

TITLE: General problems of the construction of automatic control systems with digital computer control

PERIODICAL: Elektrichestvo, no.11, 1962, 62-67

TEXT: The article is a general survey of the basic concepts and principal problems of the title subject. According to the author, the use of digital computers in automatic control systems has not gone beyond the stage of exploratory investigations. The principal problems to be solved include the following: 1) definition of criteria of optimality; 2) development of control algorithms; 3) mathematical description of the production process; 4) design of the automation system from the viewpoint of information-flow block diagrams; 5) development of suitable probes and detectors. The basic systems envisaged range from control of an indirect parameter, which cannot be directly measured, up to "self-organizing" systems. The question is being hotly debated whether control computers should be special-purpose or general-purpose; the author defends the latter on grounds of flexibility and reliability of computers produced in large series.

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KAGAN, B.M., doktor tekhn. nauk; URMAN, Ye.L., kand. tekhn. nauk

Use of computers in studying electromechanical transients in systems containing synchronous generators. Vest. Elektroprom. 34 no.7:20-29 Jl '63. (MIRA 16:8)

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ACCESSION NR AM4045078 BOOK EXPLOITATIONS S/

Kagan, Boris Moiseyevich; Ter-Mikaelyan, Teodor Mikhailovich

Solution of engineering problems on digital computers (Reshenniye inzhenernykh zadach na tsifrovykh vychislitel'nykh mashinakh), 2d ed., rev. Moscow, Izd-vo "Energiya", 1964, 591 p. illus., bibliog. 20,000 copies printed.

TOPIC TAGS: digital computer/ ALGOL-60

PURPOSE AND COVERAGE: This book examines the problems of using digital computers for engineering calculations and research. The principles of a digital computer, programming, and methods of solving engineering problems on a digital computer are given. The operator method of programming and basic information on the algorithmic language ALGOL-60 are included. The methods of calculation and research on a digital computer as applied to transient processes and the stability of dynamic systems, the technical problems leading to extremal problems for ordinary differential equations, and equations in partial derivatives are presented. The principles of the Monte Carlo method and the principles of its use in studying control systems are given. The methods of solving problems of linear and nonlinear planning are also

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given. There is a brief presentation of the principles of control computers and systems of automatic data processing and the programming for these systems. The book is intended for researchers, engineers, and graduate students. It can be used by students of higher technical educational institutions as a textual aid for the course "Mathematical machines and programming".

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AUTHOR: Kagan, B. M. (Doctor of technical sciences); Dolkart, V. M. (Candidate of technical sciences); Novik, G. Kh. (Candidate of technical sciences); Stepanov, V. N. (Engineer); Kanevskiy, N. M. (Engineer); Luk'yanov, L. M. (Engineer); Tanayev, M. Ya. (Engineer); Polyakov, V. N. (Engineer); Kolty*pin, I. S. (Engineer); Ul'yanova, Ye. K. (Engineer); Adas'ko, V. I. (Engineer); Molchanov, V. V. (Engineer); Voitelev, A. I. (Engineer)

TITLE: VNIIEM-1 multipurpose control computer

SOURCE: Elektrotekhnika, no. 7, 1964, 4-10

TOPIC TAGS: digital computer, multipurpose digital computer, control system computer, data reduction system, automatic data reduction system, data processing system

ABSTRACT: The Vsesoyuzny*y nauchno-issledovatel'skiy institut elektromekhaniki (All-Union Scientific Research Institute of Electromechanics) has developed a transistorized multipurpose digital computer and automatic data reduction system, the VNIIEM-1. The VNIIEM-1 comprises: 1) a ferrite-core memory unit which consists of 2048 locations each

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681.142 32

AUTHOR: Kegan, B. M.; Dolkart, V. M.; Novik, G. Kh.; Kanevskiy, M. M.; Luk'yanova, [illegible]; [illegible], N. K.; Koltypin, I. S.; Adas'kin, V. I.; Kolchanov, [illegible]

[illegible] control computer. Class 42, No. 170213

[illegible]

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arrangement of the adder and the memory unit with its output parity check control. Speed is increased by an asynchronous mode of operation, and a special design of the adder, in which the time necessary for information distribution is kept to a mini-

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mum. High overall reliability is achieved by a temperature-stabilized, high-speed, disturbance-immune memory unit design. Other reliability features include the absence of interference between the B-register contents and its counter, a longitudinal parity check for the punch tape, an automatic tape misalignment guard, and automatic drift compensation in the multichannel A/T and D/A converters. [WD]

ASSOCIATION: Vsesoyuznyy Gosudarstvennyy kraynego ob"yedineniya nauchno-issledovatel'skiy institut elektromekhaniki (All-Union Scientific Research Institute of Electromechanics)

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